This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of synthesizing electronic components incorporating nanoscale filamentary structures, the method comprising:

making a nanoporous membrane having a plurality of pores in a thin layer transferred or deposited onto a single-crystal substrate;

depositing[[,]] a metal catalyst in and on the nanoporous membrane, [[a]] the metal catalyst suitable for penetrating into at least some of the pores of the nanoporous membrane;

~~causing~~ growing filamentary structures ~~to grow~~ on the catalyst in the at least some of the pores ~~in~~ of the nanoporous membrane;

~~preparing~~ wherein the nanoporous membrane is prepared in a manner suitable for ensuring that ~~the~~ a wall of the pores includes a single-crystal zone, and

~~growing~~ wherein at least some of the catalyst is grown epitaxially on said single-crystal zone and on at least a portion of the ~~single crystal substrate~~ nanoporous membrane common to numerous pores.

2. (Previously Presented) A method according to claim 1, in which the pores of the nanoporous membrane have a calibrated size.

3. (Original) A method according to claim 1, in which the nanoporous membrane is made in a manner suitable for ensuring that it extends substantially in a plane, and the pores are made in a manner suitable for ensuring they are oriented substantially perpendicularly to the plane of the membrane.

4. (Original) A method according to claim 1, in which the nanoporous membrane is made in a manner suitable for ensuring that it extends substantially in a plane, and the pores are made in a manner suitable for ensuring they are oriented substantially parallel to the plane of the membrane.

5. (Original) A method according to claim 1, in which the single-crystal zone of the wall of the pores in the nanoporous membrane corresponds to the bottom of the pores.

6. (Original) A method according to claim 1, in which the nanoporous membrane is made by anodic oxidation of a single-crystal substrate.

7. (Canceled)

8. (Previously Presented) A method according to claim 1, in which a barrier layer is made on the single-crystal substrate, prior to transferring or depositing the thin layer onto the single-crystal substrate, the material of said barrier layer forming a diffusion barrier and being suitable for preventing the catalyst, at least in part, from being contaminated by the material constituting the substrate.

9. (Original) A method according to claim 1, in which, prior to growing the catalyst in at least some of the pores of the membrane, a diffusion barrier forming material is deposited that is suitable for preventing the catalyst, at least in part, from being contaminated by the material underlying it.

10. (Original) A method according to claim 1, in which the catalyst is deposited in at least some of the pores by electroplating.

11. (Original) A method according to claim 1, in which the catalyst is deposited in at least some of the pores by chemical gas deposition.

12. (Original) A method according to claim 1, in which the catalyst is deposited in at least some of the pores of the nanoporous membrane, and then the catalyst as deposited in this way is annealed.

13. (Original) A method according to claim 12, in which annealing is performed under a magnetic field.

14. (Original) A method according to claim 1, in which an electronic component is made on the nanoporous membrane.

15. (Original) A method according to claim 1, in which the nanoscale filamentary structures are carbon nanotubes.

16. (Original) A method according to claim 15, in which the catalyst comprises a transition metal.

17. (Original) A method according to claim 1, in which the filamentary structures are deposited by chemical vapor deposition.

18. (Original) A method according to claim 1, in which the nanoscale filamentary structures are nanowires or nanorods.

19. (Original) A method according to claim 18, in which the catalyst is a metal from the list comprising gold and aluminum.

20. (Currently Amended) A component for electronics including at least one nanoscale filamentary structure obtained by the method according to claim 1, the component comprising:

a nanoporous membrane in which the pores include a single-crystal zone; and

a metallic catalyst deposited in at least some of the pores of the nanoporous membrane, at least part of the catalyst being grown epitaxially on the single-crystal zone of the nanoporous membrane and on at least a portion of the nanoporous membrane ~~the single-crystal substrate~~ common to numerous pores.

21. (Original) A component according to claim 20, in which at least a portion of the nanoporous membrane constitutes an electrode enabling a voltage to be imparted to at least one filamentary structure deposited in another portion of the nanoporous membrane.

22. (Previously Presented) A component according to claim 20, lying on a substrate and including at least one filamentary nanoscale structure extending parallel to a plane of the substrate.

23. (Previously Presented) A component according to claim 20, including an electrode having an extension in a pore of the nanoporous membrane.

24. (Original) A component according to claim 20, in which at least one filamentary nanoscale structure is a carbon nanotube.

25. (Original) A component according to claim 20, in which at least one filamentary nanoscale structure is a rod or a wire.